WHAT IS CLAIMED IS:

1. A transmitter comprising:

a quadrature modulator for providing a quadrature modulated signal from a pair of quadrature base band signals;

a variable gain amplifier for providing an amplified quadrature modulated signal;

an up-converter for up-converting said amplified quadrature modulated signal to a higher frequency signal;

a variable gain power amplifier for providing an amplified higher frequency signal from said higher frequency signal, said amplified higher frequency signal comprising amplitude and phase information; and

phase adjusting means for adjusting an overall phase of a transmitter chain including said quadrature modulator, said variable gain amplifier, said up-converter, and said variable gain power amplifier, said overall phase being adjusted on the basis of pre-stored phase information reflecting phase changes due to simultaneous gain changes of gains of at least said variable gain amplifier and said variable gain power amplifier.

2. A transmitter as claimed in Claim 1, wherein said transmitter is configured to operate according to a given standard that mandates that said phase changes will not exceed a predetermined value, said phase adjusting means being configured to keep said phase changes below said predetermined value.

3. A transmitter as claimed in Claim 1, wherein said transmitter chain has an overall substantially constant gain.

4. A transmitter as claimed in Claim 1 wherein said phase adjusting means comprises processing means and said pre-stored

pre-stored phase information is stored in a lookup table, said processing means being configured to calculate a phase adjustment value for said overall phase from gain and phase information at entries in said look-up table upon a gain change of said gain of said variable gain power amplifier.

5. A transmitter as claimed in Claim 4, wherein said phase adjusting means is a base band quadrature phase rotator rotating said quadrature base band signal prior to modulation.

6. A transmitter as claimed in Claim 4, wherein said transmitter further comprises a temperature sensor providing a temperature value, said look-up table comprises said pre-stored phase information for different temperatures, and said processor also calculates said phase adjustment value on the basis of said temperature value.

7. A transmitter as claimed in Claim 4, wherein said transmitter further comprises a battery voltage sensor providing a battery voltage value, said look-up table comprises said pre-stored phase information for different battery voltages, and said processor also calculates said phase adjustment value on the basis of said battery voltage value.

8. A phase adjuster for a transmitter comprising a transmitter chain including a quadrature modulator, a variable gain amplifier coupled to said quadrature modulator, an up-converter coupled to said variable gain amplifier, and a variable gain power amplifier coupled to said up-converter, said phase adjuster being arranged for adjusting an overall phase of said transmitter chain on the basis of pre-stored phase information reflecting phase changes due to simultaneous gain changes of gains of at least said

variable gain amplifier and said variable gain power amplifier.

9. A phase adjuster as claimed in Claim 8, for a transmitter that is configured to operate according to a given standard that mandates that said phase changes will not exceed a predetermined value, said phase adjuster being configured to keep said phase changes below said predetermined value.

10. A phase adjuster claimed in Claim 8, further comprising processing means, and a look-up table, said pre-stored pre-stored phase information is stored in said lookup table, said processing means being configured to calculate a phase adjustment value for said overall phase from gain and phase information at entries in said look-up table upon a gain change of said gain of said variable gain power amplifier.

11. A method of adjusting an overall phase of a transmitter chain including a quadrature modulator, a variable gain amplifier coupled to said quadrature modulator, an up-converter coupled to said variable gain amplifier, and a variable gain power amplifier coupled to said up-converter, said method comprising:

adjusting an overall phase of said transmitter chain on the basis of pre-stored phase information reflecting phase changes due to simultaneous gain changes of gains of at least said variable gain amplifier and said variable gain power amplifier.

12. A method as claimed in Claim 11, wherein said transmitter chain further comprises a variable gain band pass filter that is arranged between said up-converter and said variable gain power amplifier, said method further comprising adjusting said over all phase by taking into account gain changes of said variable gain band pass filter.

13. A method as claimed in Claim 11, further taking into account frequency changes in a higher frequency signal provided by said variable gain power amplifier.

14. A communication device including a transmitter, said transmitter comprising:

a quadrature modulator for providing a quadrature modulated signal from a pair of quadrature base band signals;

a variable gain amplifier for providing an amplified quadrature modulated signal;

an up-converter for up-converting said amplified quadrature modulated signal to a higher frequency signal;

a variable gain power amplifier for providing an amplified higher frequency signal from said higher frequency signal, said amplified higher frequency signal comprising amplitude and phase information; and

phase adjusting means for adjusting an overall phase of a transmitter chain including said quadrature modulator, said variable gain amplifier, said up-converter, and said variable gain power amplifier, said overall phase being adjusted on the basis of pre-stored phase information reflecting phase changes due to simultaneous gain changes of gains of at least said variable gain amplifier and said variable gain power amplifier.